Running Head: Evolution's Sexual Politics

The (Sexual) Politics of Evolution: Popular Controversy in the Late Twentieth Century UK

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Acknowledgements

The research underlying this article was supported by postgraduate studentships and a Postdoctoral Fellowship granted by the UK Economic and Social Research Council. I would like to express my gratitude for the advice and support of my doctoral supervisors Wendy Faulkner and Steve Sturdy of the University of Edinburgh. Thanks also to Peter Hegarty for editorial advice and great patience, Professor John Maule at the University of Leeds for supporting my continuing publications, and the anonymous referees of this article for their very helpful comments.

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Abstract

In this article, the major threads of controversy around the emerging subject of evolutionary psychology, in the UK mass media during the 1990s, are outlined. Much of this centered upon the role of evolution in shaping human gender roles and sexualities, contributing to the mass appeal of the subject. This case is used to illustrate the argument that theorizing about evolution and humans, 'human nature' and 'human origins' both provides a flexible resource for making arguments about how people do and should relate to one another, and that such theorizing is therefore reflective of how power is held (and contested) in society. In the case of popular evolutionary psychology, shifts in the UK (party) political landscape during the 1990s, combined with changes in gender and sexual politics to create a situation where evolutionary theorizing about humans became more acceptable than it had been in the past. This was particularly true in left-liberal media, where a new found compatibility between certain aspects of Darwinism and feminism created a very different space for debating gender, sexuality and the role of 'human nature' in today's society.

Keywords: popular science; evolutionary psychology; Darwinism; gender politics; sexuality; mass media

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In her classic work on the history of primatology, Donna Haraway (1986, 1989) famously argued that "primatology is politics by other means" (1986; p77). From the early 20th century, when 'great white hunters' gradually became naturalists, through laboratory, ape language, and back again to field studies of primates, researchers have often cast the activities of our closest relatives as versions of our own society. More recently, historians have started to investigate relationships between the sciences of animal behavior, and the human societies which have produced these studies (e.g. Crist, 1998; Sleigh, 2002). This work has increasingly shown how arguments about other animals can function as stories and myths about ourselves. This is particularly pertinent for studies of primates, our closest evolutionary relatives, who not only look and act, but may even think like us, inviting speculations about human origins. As Haraway (1986, p. 87) put it:

> Primatology is a contested field within Western cultures for defining what it means to be human. As such, it is a major social practice for Western 20th century people to construct and negotiate the boundaries between human and animal, gender and sex, Western and other, culture and nature, whole and part.

Such studies of primates, and of other animals, have provided us with allegories and mirrors for negotiating who we are, and what 'human nature' might, or might not, be. Indeed, when human nature is itself the subject of enquiry, the answers become even more fiercely contested because they have a direct bearing on how we do and should relate to each other. These histories have also shown us the ongoing power of appeals to 'nature' in supporting arguments about how people, society and politics *should* be, a theme also explored in the other contributions to this volume. Recent work by Hansen (2006) has shown how the term 'human nature' continues to hold symbolic power in today's mass media, both to invest arguments with authority and legitimacy, but also as an idea to be actively challenged.

Narrative and stories play a central role in the construction of knowledge in the sciences of animal behavior and human origins, particularly in aiding in the work of building good explanatory theories (e.g. Caporeal, 1994; Latour and Strum, 1986; Rees, 2001). Therefore, the stories told about humans and evolution, in terms of where we came from, and how our origins affect us today, are valuable resources for understanding contemporary societies, and the changes and struggles they are engaged in (Haraway, 1991).[1] Studies of evolution and humans go back to the work of Darwin himself and beyond, and have had a complex and controversial history. Darwinism in the twentieth century has been popularly associated with rightwing thought, to the extent that that it can be forgotten how flexible these ideas have actually been in the past. Historical studies have shown that evolutionary and even eugenic ideas have in the past been associated with a much broader range of scientific and political opinion, including radical leftwing and feminist thought. This was particularly the case during the early period following Darwin's publication of *The Origin of Species* (Stack, 2000), but was also true well into the twentieth century, through much of the 1930s (Kline, 2001; Malik, 2000) and into the postwar period (Ramsden, 2002). It was during these years that evolutionary

and anti evolutionary positions formed a more familiar pattern, congruent with the biological/social causation; natural/social science and right/leftwing axes of debate developing at the time (Degler, 1991, Kevles, 1995).

In his work on the controversy over the possibility of links between race and IQ during the 1960s and 1970s, Harwood (1977) showed that although these axes were strongly in operation here, a 'pro-biology' position on IQ need not *necessarily* have conservative political implications, and *vice versa*. The historical contingencies of the 20th century, in particular postwar reactions against the Nazis' application of eugenic ideas in their 'Final Solution', had led to a situation where biology and politics had become inextricably linked in this particular way. Harwood instead argued that scientific ideas about biology, evolution and human nature provide flexible resources that can be utilized in political rhetoric. However, this is not to imply that evolutionary science is in some way ideologically 'pure', and then becomes 'contaminated' by political and social concerns. Instead, I would argue that whenever evolutionary stories are concerned, explicitly or implicitly, with human origins, they are inherently political, and as such will reflect the social and political concerns of the society which produces them, particularly (but not exclusively) of those holding power.

Although there is a well established historical literature on Darwinian and evolutionary thought from the late 19th to mid 20th century, research on the later part of the 20th century and beyond is much sparser. A few key studies have addressed the Sociobiology controversies of the 1970s and '80s (Brown, 1999; Jumonville, 2002; Segerstrale, 2000), but developments beyond this time have rarely been explored. This article will explore the more recent case of evolutionary psychology, looking at how this newly emerging subject was discussed and debated in the public domain of the UK media during the 1990s. Although evolutionary psychology had its academic origins in North America, there are good reasons for studying the UK context, particularly in terms of the relations between ideas about human nature, biology, evolutionary story-telling, society, culture and power. In particular, the combination in the UK of a lively and competitive media, a tradition of public debate and a largely secular society can create a specific space for public discussions of science and technology, as seen with recent controversies over genetically modified foods (Gaskell and Bauer, 2001).

Research on USA and UK media coverage of claims about the discovery of a 'gay gene', also illustrates this point: whilst US newspapers largely accepted the claims, and were optimistic about their implications, their UK counterparts were highly skeptical, contesting the validity of the science and raising concerns about the potential negative uses of such a discovery (Conrad and Markens, 2001; Miller, 1995). Further research has linked the widespread acceptance of 'gay genes' and other research linking homosexuality and biology in the US to the greater influence of conservatives and the religious right campaigning against homosexuality as a 'lifestyle choice', and the consequent strategies adopted by gay rights campaigners to counter this (Brookey, 2002). Although no work has yet been done on popular evolutionary psychology in the United States, one can speculate that similar issues may have been at play in this case: the high profile of debates over creationism and intelligent design, questioning the existence of the

evolutionary process in the first place, may mean that there is less opportunity to debate the potential implications of such processes (e.g. Park, 2001). Similarly, little research has addressed contemporary evolutionary debates in mainland Europe or outside of First World contexts, although work on the reception of '*Soziobiologie*'[2] in Germany suggests that claims about evolution and humans continue to be far more controversial there than in the UK (Euler and Voland, 2000; Linke, 2006).

Alongside much work in both historical and contemporary social studies of science and technology (e.g. Jasanoff et al, 2002), I aim to study this controversy symmetrically: by addressing the values, interests and concerns of all sides in the debate over evolutionary psychology in a similar manner (Bloor, 1991). As much as is possible, this analysis attempts to stand outside of the controversy, rather than contributing to it, a stance which may be vital, considering the 'live' and heated nature of the debate, and the - perhaps inevitable – risks and temptations that my own analysis will become 'captured' and incorporated into the subject of my study, by being taken up by the participants in supporting their arguments (Ashmore and Richards, 1996).[3] As such, this work will not be evaluating the validity or otherwise of arguments that have been made in the evolutionary psychology debates, although this may disappoint both advocates and critics of EP.

In line with this position, I wish to contribute minimally to debates over the differences and similarities between sociobiology and evolutionary psychology. As I have documented elsewhere (Cassidy, 2006), these have been extremely complex, with the strategic usage of one term or another often aiming towards the creation or elision of boundaries between the two according to the rhetorical aims of the participants.[4] For the purposes of clarity, in this paper, 'evolutionary psychology' refers broadly to English-speaking evolutionary theorizing about humans since the 1990s, particularly associated with researchers in the social sciences and humanities. 'Sociobiology' (capitalized) refers specifically to the public controversy following from the publication of Wilson's (1975) book, while 'sociobiology' refers to evolutionary theorizing about animals and humans since the 1970s, more influenced by research in animal behavior and primatology, and more frequently located in biological disciplines. These definitions must, however, be seen as relative and flexible, especially considering the growing popularity of 'evolutionary psychology' as a descriptive term, and the continuing proliferation of disciplinary labels in the area (Mysterud, 2004).

Indeed, one of the boundaries under contention in EP controversies was the one frequently drawn between academic and popular science. To similarly avoid engaging with such 'boundary work' (Gieryn, 1983), this research addresses peer reviewed journals; popular science books; newspaper articles; interviews; TV and film; images and online items in the same way, treating them all as primary research data.[5] This article will describe how evolutionary psychology (EP) was covered and debated by the UK popular media, paying attention to the specific cultural and political contexts at play during the 1990s. Unlike the earlier Sociobiology debates, the biological/social causation; natural/social science and right/leftwing axes of debate described above became significantly disrupted in this case. In particular, this occurred around issues of sexuality

and gender politics, whereby significant threads of debate employed variations upon a pro-evolutionary, pro-feminist position. I will argue that this provides further evidence of the ideological flexibility of Darwinian story-telling about humans, and as with earlier episodes in the history of evolution, that this shift reflects changes in the balance of social power occurring at this time.

'New Darwinism' and the UK of the 1990s

Evolutionary psychology originated with the work of a group of North American psychologists, physical anthropologists and linguists who, influenced by sociobiological ideas, set out to create an approach to social science research employing evolutionary theory as its main theoretical framework (Cosmides and Tooby, 1989; Barkow et al, 1992). The first popular EP book, *The Moral Animal* (Wright, 1994a), appeared not long after these early publications, and set out the major ideas of the "new science" of evolutionary psychology. Indeed the very earliest press coverage arose from reviews and discussions of this book, which was written by an American science writer. However, UK coverage levels remained low until 1996, when they started rising, at first steadily and then increasingly steeply during the late 1990s, reaching their peak in the year 2000, after which they dropped off quite sharply. Much of this coverage was closely associated with the publications of other popular books on the subject (e.g. through reviews), and the opposing arguments of these books then set the tone of this coverage as one of controversy, with participants arguing both for and against the claims of evolutionary psychology. During the early 1990s, citation rates for 'evolutionary psychology' were very low, did not start to rise until the late 1990s, but have continued to increase in the years following 2000 (Cassidy, 2005). The relationship between academic and popular science in this case has been highly complex, and quite unusual, avoiding as it does the conventional route of scientific 'popularization'. This is closely connected with the controversial nature of evolutionary theorizing in the social sciences and the location of the subject at the borders of some important boundaries of science, including those between natural and social science, science and politics, and science and the public domain. I have argued that this border location may have made it easier for evolutionary psychologists and their opponents to make their arguments in the popular domain of the mass media, where they could reach audiences in multiple disciplines, as well as beyond academia. Among other things, this controversy has involved a struggle over the legitimacy of varying disciplines to study 'human nature' (Cassidy, 2006).

This article will closely examine the factors which made this public controversy a British phenomenon, and look at why EP had such great popular appeal at this particular time and place. Of fundamental importance was the nature of the UK press at this time, which had at least ten national daily newspapers, subdivided into broadsheet, mid-market and 'red-top', tabloid formats.[6] This was and continues to be a highly competitive environment, in which newspapers struggle for sales. They use a great variety of methods to grab readers' attention, one of which has been to increase in volume, creating a need for more material to provide content, particularly in lifestyle, comment and 'feature' (in-depth) pages. EP was seen by journalists and editors as intuitively easy to understand and inherently interesting to readers, and so was looked upon as a valuable

source of 'good stories'. It was covered most frequently in the broadsheet press, not only as science news articles, but also featuring heavily in features and opinion pieces, written by scientists, novelists, and journalists of many kinds (Cassidy, 2005).

'New Darwinism' was a term used occasionally in media discussions of evolutionary psychology, which was a reference to 'New Labour', the reformed version of the UK Labour Party. The 1990s was a period of significant re-alignment and change on both the US and UK political stages, and the popular discussion of EP was intertwined with these changes both in practical, and rhetorical, symbolic terms. Following many years of opposition, and the election of the centrist Democrat president Bill Clinton in the USA during 1992, Labour underwent a series of internal reforms, electing a new leader, Tony Blair, who subsequently brought the party to a landslide victory in 1997. The most obvious connection between EP and New Labour can be seen when coverage of the subject started to seriously take off during 1996 and 1997. At this time, the think tank Demos collaborated with 'Darwin@LSE', a research group based at the philosophy department of the London School of Economics, to launch a collection of essays on EP and policymaking (Curry, Cronin and Ashworth, 1996). This and other publications, popular science books, and public lectures, were well-publicized, receiving large amounts of press and other media coverage. Between them, they created an awareness of the subject and 'EP' label in the public domain (Cassidy, 2006). Demos was established in 1993, and is formally independent of any UK political party. However, it was founded around the time of the Labour party reforms and many of its ideas broadly fit within the centre-left agenda of New Labour. Demos' ideas have been described as 'a radical agenda of eye-catching, media friendly policies'(Anon, 2005), and evolutionary psychology fit well with this agenda. Demos' founder and first director, Geoff Mulgan, was also enthusiastic about evolutionary psychology (Mulgan & Leadbetter, 1995). Since moving on from Demos in 1997, Mulgan was first a special advisor to the Prime Minister, and then, until recently, head of various policy units within government (West & Wintour, 2002). It is hard to gauge whether evolutionary psychology had any lasting influence upon policymaking, but the links between EP and political thinkers at the time certainly helped it gain media attention and visibility in the UK public domain.

The elections of Clinton and Blair resulted in a significant shift of power in both countries, from the rightwing regimes of the 1980s and early 1990s, to a new form of centre-left politics, in which pragmatism and the wishes of the voter came before any strong political ideology. Blair in particular was strongly influenced by the political philosophy known as 'The Third Way' (Giddens, 1998), which rejected traditional conceptions of 'left' and 'right' in political thought. In line with these shifts, evolutionary psychologists positioned themselves carefully, particularly with respect to the history of earlier associations between evolutionary and political ideas. The Sociobiology debates of the 1970s have often been depicted as arguments between rightwing, anti-feminist biologists using evolution theory to justify the social *status quo*; and leftwing radicals arguing against this as a justification of racism and sexism. Although the situation was probably more complex than this,[7] pro and anti Sociobiology arguments, particularly in the public domain, were broadly congruent with the right and leftwing political agendas of the time (Segerstrale, 2000). Such repositioning away from

the politics of Sociobiology can be clearly seen in the following interview with the linguist and popular author Steven Pinker, in which he started by refuting charges of his own 'biological determinism', an accusation frequently aimed at Sociobiology.

> INTERVIEW: THE MAN WHO THINKS HE'S A COMPUTER
> 'By Darwinian standards, I am a horrible mistake, a pathetic loser,' says Professor Steven Pinker. He is explaining why, despite two marriages, he has chosen to remain childless, 'But I am happy to be that way, and if my genes don't like it they can jump in the lake.' (Langton, 1997, 07 December; *Sunday Telegraph*)

Later, he hints at left leaning political opinions, but then invokes an idea known as the 'naturalistic fallacy' (that it is a mistake to infer politics from science) to further insulate himself from accusations of political conservatism:

> Apart from expressing support for controlled abortion, and a brief attack on those who believe race and intelligence are linked – 'It is irrational. The colour of your skin is clearly related to climate' – Pinker seems consciously to steer away from political debate. 'Do I have opinions? Yes, of course.' But he prefers to keep them to himself? 'Not necessarily because I am namby-pamby, but really, you know there are only so many hours in the day. Science is distinct from moralising or legalising' (Langton, 1997, 07 December; *Sunday Telegraph*)

By creating a division between 'pure science' and politics, this statement distances EP from psychological theories linking race and IQ (Hernstein and Murray, 1994), helping to establish evolutionary psychology's mainstream, liberal, anti racist political credentials.[8] Other evolutionary psychologists were more or less emphatic about creating these divisions, but the range and broad positioning of their politics was on the whole further to the left than that of the Sociobiologists. This was particularly the case when it came to gender and sexual politics, a subject I will return to later.

An important aspect of the 'third way' political philosophy was what Weltman and Billig (2001) describe as 'the ideology of no ideology' - a consistent suspicion of any overt political ideology, particularly those of the left, such as socialism. Similarly, when engaging with their critics, evolutionary psychologists often adopted similar language to that used by New Labour against traditional leftwing opponents. EP's opponents are 'ideologically motivated'; unable to face up to 'hard truths'; are 'unaccountable' and ignore 'evidenced based policy'; all phrases in use by New Labour. A good example of this rhetoric can be seen in the following review, written by an evolutionary psychologist, of a book of essays critiquing EP ideas (Rose and Rose, 2000)

> TAKING A POP AT PSYCHOLOGY
> The contributors are largely sociologists of the 1960s New Left generation, whose critiques of 1970s socio-biology are recycled here with more political self-righteousness than scientific integrity. They characterise evolutionary psychology as pernicious conservatism, but fail to explain why it has attracted the support of so many socially conscious thinkers, […]. Their goal is not to improve evolutionary psychology, but to stop it because they think it has a hidden ideological agenda contrary to their personal views. In practice, they just want the social sciences to be

> left alone, empirically unaccountable to the biological sciences, and fiscally unaccountable to tax-payers who are demanding more evidence-based social policies. Their anxieties stem from a distinctly intellectual kind of paranoia, a belief that science has far more power to shape political beliefs than it really does. (Miller, 2000, 03 July; *Evening Standard*)

Another important feature of the New Labour political philosophy was a very modernist faith in science and technological progress. Political shifts towards the centre, combined with the strength of the new government's majority, led to a 'flattening' of the political landscape, and a widespread popular feeling that politics in the 1990s was no longer interesting. Therefore, science was one of the things that came in to fill the space in the media left by an absence of political debate, as argued in this piece written in 1998.

> POLITICS IS DEAD. SCIENCE IS SEXY. SCIENTISTS ARE TOO, ESPECIALLY IF THEY'RE CALLED STEPHEN, STEVEN OR STEVE…
> Party politics no longer provides the ammunition for argument. Who argues about the minimum wage, New Deal or independence for the Bank of England? How many of last night's dinner parties strayed onto proportional representation? The issues which divide us today are genetically modified crops, cloning, the use of embryo material for transplants… (Thomas, 1998, 29 November; *The Observer*)

The 'Steves' of this piece were the stars of the popular science boom of the 1990s, such as Stephen Hawking, Stephen Jay Gould, Steven Pinker, Steven Rose and Steve Jones, several of whom were involved in EP controversies. This boom, with previously unknown sales levels for science books, and high advances offered to scientist/authors, generated yet more media attention. As is implied above, biology featured heavily in the public science of the 1990s, with its designation as 'the decade of the brain' at the beginning of the decade, followed by a series of dramatic developments in brain science, biotechnology and genetics. This culminated, in the year 2000, in the joint announcement, by Bill Clinton and Tony Blair, of the completion of the rough draft of the Human Genome Project to great international fanfare. Taking over from the previously dominant physical sciences, biomedicine became the most heavily reported area of science during the 1990s (Bauer, 1998). EP benefited from this dominance in several ways: firstly through being a 'brain science' through cognitive psychology, and secondly via genetics. In the media, 'genetic' was frequently used as a synonym for 'evolved' as in, 'we are genetically programmed to do X', a confluence which goes back at least as far as Richard Dawkins' *The Selfish Gene* (1976).[9]

In the UK, Darwin himself played a powerful role in this visibility of the life sciences, as a British cultural icon and an important part of the UK's scientific heritage. His image as a 'bearded sage' was highly visible, notably on the ten pound note issued by the Bank of England in 2000. Darwinism and evolution were invoked in car advertisements, an 'Evolution Weekend' of BBC programming, and of course the 'Darwin Seminars', hosted by Darwin@LSE. The prominence of Darwinian science was also noted not only alongside politics, but also religion, in the context of the decline of the Church of England and the growth of an increasingly multifaith and secular society.

> AND DARWIN CREATED US ALL…

> Now the faith once placed in God is laid at the feet of a funny old man with a beard who walked round his garden in the village of Down, in Kent, 150 years ago. […] The new Darwinism sometimes sounds like a religion. People believe in it: they make an act of faith. Darwinism is naturally a "broad church", and within it are sects, schisms and heresies. People who talk about it slip into the language of religion, refer to some of the scientists as "high priests" and those who follow them as acolytes. (Radford, 1999, 06 February; *The Guardian*)

In a similar fashion, Darwin's iconic status was also apparent in discussions of different theories of human nature and their perceived power and influence at the end of the 20th century:

> GENES RUNNING AMOK AS DARWINISM EVOLVES
> It is the turn of the third bearded old man. Marx, Freud and Darwin have cast equally long shadows over the history of the 20th century. But it looks as if Darwin is in the fittest shape to survive into the 21st. Allied to the rise of molecular genetics and brain science, Darwin's founding idea of natural selection – the struggle for life that produces nature's diversity – has evolved into something called 'New Darwinism'. (Kane, 1996, 19 May; *Scotland on Sunday*)

The theme of comparisons between 'bearded old men', and the ideas that they stand for, was a recurring one in the coverage of evolutionary psychology. Sometimes the trio would appear together, while at other times Darwin would be compared with one or other of his 'competitors', with the clear implication that it was Darwin's ideas that were in the ascendant.

Figure One: Cartoon illustration for 'EVOLUTIONARY WORKER'S PARTY', by Peter Singer, *Times Higher Educational Supplement*, 15 May 1998 (reproduced with kind permission from Peter Schrank)

Each of these men represents a set of ideas about people, so Marx represents traditional leftwing politics, as well as social sciences such as sociology. The 'fall of Marx', as seen in Figure One, refers to the political shifts towards the centre-left described above, as well as implying the waning influences of such academic disciplines. Freud of course represents psychoanalysis, as one of the most influential set of ideas about what makes people tick. He also personifies an enduring popular image of what the subject of psychology is all about (psychotherapy), whereas EP is part of the cognitive, experimental tradition of psychology research, which has been less publicly visible. Darwin most obviously represents evolutionary psychology and evolutionary thought, but in this context he also stands for biology and 'science' in general, as a potential (apolitical) governing concept for society.

However, the positioning of EP within these contexts of 1990s UK politics, science and power somewhat fade into the background next to the far more significant issue of sexual and gender politics. This was by far the most popular subject of media coverage about EP (Cassidy, 2005; p124), and also provided the key difference in political positioning between the Sociobiology and evolutionary psychology controversies. Just as the broader political context had changed greatly since the 1970s, so social attitudes to sexuality and gender had also transformed and become more complex during the 1990s. This diversity dovetailed neatly with the way in which 'Darwinian' positions had also diversified over the years: evolutionary psychologists were not alone in making popular

arguments about human nature at this time. Indeed, this was to the extent that 'Darwinism' and 'feminism' were no longer seen as mutually exclusive. At times the two were argued to be completely congruent, changing the overall acceptability of applying evolutionary theories to humans in the UK. In turn, evolutionary psychology provided a convergence point for ongoing debates about sexuality; gender roles; family life; and work in and outside of the home.

"Feminists, meet Mr. Darwin"

Feminists, meet Mr. Darwin was the title of an article by EP author Robert Wright, written around the time that his popular book on the subject was published (Wright, 1994, 28 November; *New Republic*). It encapsulates well the widely held belief that Darwinism and feminism are mutually exclusive. This understanding was largely forged during the Sociobiology debates of the 1970s, when many authors used evolution to argue against the newly developing women's liberation movements (Barash, 1979; Wilson, 1978), while in turn feminists critiqued their ideas as inherently sexist, providing a justification for traditional gender roles (e.g. Bleir, 1984). During the 1990s this dynamic continued quite strongly: for example in headlines such as 'New book pits feminists against Darwinians' (Freely, 1999, 21 March; *The Observer*), or in the following piece from Steven Pinker, from his 1998 book *How The Mind Works*:

> These [*feminist*] kinds of arguments combine bad biology (nature is nice), bad psychology (the mind is created by society) and bad ethics (what people like is good). Feminism would lose nothing by giving them up. (Pinker, 1998; p493)

This is fairly typical of EP rhetoric when engaging with opponents. As with the earlier piece reviewing an anti-EP book, it defends by attack, anticipating the likely alternative positions that may be offered, and portraying them as unviable. Evolutionary explanations of gender and sexuality were largely argued to be the exclusive alternative to social science and feminist explanations, invoking learning, social conventions and the importance of patriarchal cultures in understanding gender difference (e.g. Buss, 1994).

Many feminist responses to evolutionary psychology have been highly critical of the claims made, reinforcing the sense of opposition (e.g. Fausto-Sterling, 2000; Segal, 1999). In many ways this is unsurprising: a brief examination of the basic evolutionary story of males and females shows a frequently implicit and sometimes explicitly conservative vision of gender politics. It is argued that, at base, sperm cells are smaller and more abundant than egg cells, meaning they must compete to achieve fertilization and pass on the DNA they carry; while eggs, having invested more resources, can 'choose' the 'best' male cell to 'be fertilized by'.[10] This basic argument is often extended to argue that sex differences in the bodies of the male and female animals that produce these reproductive cells, and including their behavior towards each other and their offspring, are the consequence of this basic imbalance. Such differences, it is argued, results in competitive and aggressive males who attempt to mate as often and with as many different females as possible. Females, on the other hand are often more adapted for nurturing offspring and are more discriminating about their sexual partners (often described as being 'choosy' or 'coy'), aiming for a 'high quality' male.[11] These

arguments form the basis of Darwin's theory of sexual selection (Darwin, 1871), and can be found in most evolutionary discussions of relations between the sexes (Dawkins, 1976; Ridley, 1993; Miller, 2000). Evolutionary psychologists, like the Sociobiologists before them, tend to argue that as mammals, humans follow this pattern, and that such evolutionary pressures have led to widespread differences between men and women.

Many of the EP claims that were most prominent in the media were related to this central issue of gender difference, particularly as expressed in terms of (hetero)sexual relationships. Indeed, EP, alongside most recent evolutionary theorizing, has had little to say about non-heterosexual sexualities, or indeed any non-reproductive sexual behavior, largely because they struggle to find direct evolutionary explanations for it (e.g. Pinker, 1998, p468, 473).[12] The nature of heterosexual attraction: 'what men (or women) really want' in an ideal partner was a central theme. Evolutionary psychologists argue that due to sexual selection, men and women behave differently in relationships, and want different things from their partners: for men, features such as youth and beauty (signals of fertility) are preferred; while women have preferences for older, richer, socially dominant men (better resources for supporting children). The potential evolutionary roots of (particularly female beauty) were explored as a consequence of this (Etcoff, 1999), as were differences in sexuality, such as male preferences for casual sex (Buss, 1994). Many of these arguments were presaged on an underlying assumption that monogamous, male-female pair bonds are the basic, 'natural' human relationship, required for the successful raising of children. Figure Two illustrates this story, in which women's need for men's help in protecting and providing for children leads to monogamy and the origins of the nuclear family (see also Ridley, 1993, 24 October).

Figure Two: Illustration, 'Human Pair Bonds', from *Introducing Evolutionary Psychology* (Evans and Zarante, 1999; p114) (reproduced by permission of Icon Books/Dylan Evans)

EP ideas were also used explain to explain gender inequalities in the workplace, arguing that the underlying reasons for the continuing 'glass ceiling' in were rooted in biological sex differences (Browne, 1998). Because of sexual selection, it was argued that men are inherently more aggressive, competitive and likely to take risks, meaning that men would seek out higher status more aggressively, leading to them progressing up the career ladder more quickly and successfully than women. In addition, these differences lead to the domination of certain professions (such as nursing or firefighting) by one sex or the other. Therefore, policy attempts at equal opportunities were argued to be misguided,

counterproductive or doomed to failure (Cronin and Curry, 2000). Perhaps the strongest opposition between feminists and evolutionary psychologists was seen in controversies surrounding an EP explanation of male - female rape (Thornhill and Palmer, 2000). Thornhill and Palmer proposed that rape was a 'sexual strategy' utilized by young, low status men who stood little chance of finding a partner consensually. As part of their argument, feminist explanations of rape (in terms of men asserting power and dominance over women) were strongly rejected, and they recommended that rape could be best avoided through women not dressing in a 'provocative' manner: arguments which in turn drew further fire from feminists.[13]

Feminism and the 'battle of the sexes'

So far, so conservative, and indeed many of the above ideas had been raised in the earlier Sociobiology debates. However, unlike during the 1970s and 80s, these were accompanied by discussions of evolution, sexuality and gender with quite different implications. Indeed, when *The Moral Animal* (Wright, 1994), was published, introducing EP to the UK media, it was accompanied by a flurry of media stories about evolution and monogamy – but with an added twist:

> JUST DOING WHAT COMES NATURALLY
> The good news is that human beings are designed to fall in love. The bad news is they aren't designed to stay there. According to evolutionary psychologists, it is 'natural' for both men and women – in some circumstances – to commit adultery or to suddenly find a spouse unattractive or irritating. It is similarly natural to find an attractive colleague superior to the sorry wreck of a spouse you're saddled with. (Wright, 1994, 20 August *Daily Telegraph*)

Similar discussions of how we are 'designed' to fall out of love after a period of time and move on to a new, better partner could also be seen in the work of anthropologist Helen Fisher (1992), who argued that there was 'an innate four year pattern to courtship, marriage, adultery and divorce'; while others explored the likely evolutionary causes and implications of women's (as well as men's) engagement in casual sex (Baker, 1996; Birkhead, 2000). Reflecting media discussion of the 'marketplace' in dating, much of this discussion made use of the idea that people 'trade in' their partner for someone else of 'higher quality'. In the case of men, it was argued that this would lead to divorce and remarriage, whereas women were argued to be more likely to deceive their current partner into supporting children conceived with somebody else. As with the idea of 'what men/women want' in a partner, these arguments share the underlying implication that relationships between men and women are all about balancing the (selfish) interests of the individuals involved, as seen here:

> A MIND TO LOVE
> Unsentimental social scientists and veterans of the singles scene agree that dating is a marketplace. People differ in their value as potential marriage partners. Almost everyone agrees that Mr. or Ms. Right should be good-looking, smart, kind, stable, funny and rich. People shop for the most desirable person who will accept them, and that is why most marriages pair a bride and groom of approximately equal desirability. (Pinker, 1998, 17 January; *The Guardian*)

Such ideas, presaged as they are upon the central idea of gender *difference*, rather than the necessary inferiority of one sex to the other, were not generally reported or perceived as directly sexist or antifeminist in the media. Although there have long been tensions among feminists between seeking the goal of gender equality, and that of furthering the cause of women in society, the conception of the sexes as 'different but equal' gained popularity during the 1990s. Perhaps most prominently in the UK, the feminist author and columnist Germaine Greer took direct issue with the goal of equality between the sexes in favor of women's liberation in her popular book *The Whole Woman* (1999). This coincided with a wider sense that feminism had perhaps achieved its goals because society had 'achieved equality', particularly in the generations growing up since the 1960s and 1970s (see, e.g. Howard and Tibbals, 2003). At the same time, although feminist movements have always included a wide variety of positions, this diversity increased during the 1990s, with discussions about first, second and third wave feminism, as well as by liberal, socialist, Marxist, radical, postcolonial, postmodern, psychoanalytic and even post-feminists (see e.g. Walter, 1998). Popular EP arguments about gender difference often drew upon traditional stereotypes about men's and women's essential nature, but reversed the values traditionally given to such traits (e.g. Daly, 1979; Merchant, 1980). So, for example, men's 'rationality' and women's 'emotional nature' transform into men's inability to relate to others, and women's superior communication skills or 'empathy'.

These shifts in the politics of feminism often translated into a broader discourse, visible in popular EP, about 'the battle of the sexes': the concept that men and women are fundamentally different, largely in opposition, vying for equality or even supremacy, yet are also somehow hoping for an understanding of one another. This was a popular theme, frequently aired in the UK media at the time, as described here in interview by a (male) freelance journalist:

> So the media like these polarisations [*between men and women*] and they like 'sex war', they like the idea of the sex war. Kathy Lette [*the novelist*] says, "Women have a better sense of humour than men."
> I say, "No! Men have a better sense of humour than women!" you know, "Men are funnier than women."
> Discuss. "Women are funnier than men." It goes on... (interview, 18/01/02)[14]

This shorthand was one which the evolutionary story of sexual selection could be easily converted into, and scientists and journalists frequently drew upon traditional positive and negative stereotypes of what men and women 'are really like':

> I WANT TO BE ALONE
> The reason that a man's wife or mother or wife's mother or son's girlfriend is more likely to know where the marmalade is kept, is that hundreds of thousands of years ago, when our ancestors were hunter gatherers on the great plains of Africa, the men were out hunting, while the women hung around the camp digging up roots and berries and arranging them in neat piles. (Williams, 1996, 24 November; *Independent*)

Coverage of EP also included claims that women are better gardeners, worse map readers, better at relating to other people, more likely to gossip and less likely to take risks than men are (Cronin, 1999; Derbyshire, 2000, 14 April; Irwin, 2002, 4 January). In the 'sex war' discourse, the problems encountered between men and women can be attributed to such differences, which cannot fundamentally be changed, but must somehow be overcome with difficulty. Keying into this were a string of self-help psychology book, most famously *Men are from Mars, Women are from Venus* (Gray, 1992), a bestseller in both the UK and US. Many of these books invoked the biological roots of such differences, sometimes using neurobiology or hormones alongside some form of evolutionary explanation (Moir and Moir, 1998; Pease and Pease, 1999).

Sex differences have long been a traditional source of humor, and indeed much of the media discussion of EP in this area was conducted in a lighthearted rather than serious manner. In the 1990s, such humor increasingly moved from being jokes told by men to men about women, to also being told by women to women about men. A good example of this can be seen in Figure Three, which could equally well be seen as a joke at men's or women's expense.

Figure Three: Joke image circulated via email (Anon); received by the author on 13th November 2000

The 1990s saw much more of this kind of humor, often from women's points of view, particularly in fictional representations of single women, such as the novel *Bridget Jones's Diary* (Fielding, 1996) and the American comedy drama series *Ally McBeal* and *Sex and the City*. These were often themed on the 'plight' of the single, professional

woman looking for a good relationship (sometimes idealized as marriage, sometimes not).[15] Bridget Jones was based around a character in her mid 30s and this was sometimes linked to EP research about the likelihood of relationships between older men and younger women (and the inferred lack of the opposite). Television schedulers made the obvious link between evolutionary psychology and such comedies: EP documentaries *Why Men Don't Iron* (1997) and *Anatomy of Desire* (1998) were screened by Channel Four either before or after the mid to late evening slots given to *Ally McBeal* and *Sex and the City*.[16] This kind of humor was also important in discussing relationship failure, adultery and divorce, changing in tone from one of mutual teasing into active hostility, as discussed here:

> NO HANKY-PANKY ON OLYMPUS
> Women circulate jokes about men the whole time. There is an entire samizdat of emails, faxes and web pages filled with dodgy wit such as, "Why did the man cross the road? Because he couldn't get his cock out of the chicken." Much as I like a laugh, I can't take this tone of humour. It sounds like a gender vendetta. (Brayfield, 2000, 19 June; *New Statesman*)

The article continues by linking the broader sexual politics of the 1990s with evolutionary arguments on the subject, bringing in a popular science book that had just been published:

> Perhaps, for straight men, we are still in the golden age of promiscuity. Pregnancy is no longer a problem, not so much because of contraception as because men reason that, with equality, women can bring up children on their own. Lad culture has promoted the growth of a callow and selfish concept of masculinity in which it is considered unmanly to take responsibility for anything. We have the biological determinists to explain that men are "hardwired" to want sex with as many partners as possible and to kill each other to get it. Male fidelity is an evolutionary impossibility, according to writers such as Tim Birkhead, whose recent book *Promiscuity*… (Brayfield, 2000, 19 June; *New Statesman*)

These discussions of the 'sex war' also involved significant contributions from men. This included threads about masculinity, evolution and gender: EP depictions of men as sex obsessed, violent risk takers seemed to strike a chord with commentators at this time. Much of this was concerned with 'the crisis of masculinity': broadly speaking, how men are engaging and coming to terms with (or not) the changes brought about by feminism. EP was invoked here in two ways: either to confirm, affirm or even celebrate the validity of traditional forms of masculinity; or to take a more anxious tone, talking about the problems faced by men in today's society. For example, Darwinism could be used to justify traditional patterns of male behavior:

> ROSES ARE RED, VIOLETS ARE BLUE. SO WHAT?
> Talking to an ageing Don Juan the other day, I was struck by his sudden defence of his behaviour, "It's in our genes," he said comfortably, "I could impregnate every woman in this room, but you couldn't have a child with every man in this room. So men evolved to be really, really promiscuous." "And doesn't that make you feel good," I said. (Walter, 1999, 14 February; *Independent*)

This could also be seen in commentary about the film *Fight Club*, arguing that male violence 'goes with the grain of nature' (Ridley, 1999, 14 September; *Daily Telegraph*) citations of Darwinism by antifeminist American 'sex gurus' (who advise men on how to 'win' in the dating game),[17] and the following piece about the UK 'fuel crisis' in 2000, in which farmers and road hauliers blockaded fuel depots, bringing the country to a standstill.

> STONE AGE MAN WOULD UNDERSTAND THE URGE TO HOARD
> To deprive 21st century man of the use of his car is as worrying to the individual as it would be to cripple a Stone Age man by injuring his legs. Anything that could threaten, however remotely, the stability of a family, and therefore its survival, engenders all sort of fears. Without petrol will the breadwinner, or winners, still be able to go to work, and earn the money to keep the family? (Stuttaford, 2000, 13 September; *The Times*)

Such affirmation was also an important part of the above-mentioned 'lad culture', based in part around newly launched men's magazines such as *Loaded*: devoted to beer, football and scantily clad women. EP was specifically linked to lad culture on several occasions, and as seen here a more ambivalent tone entered the discussion:

> DON'T BLAME ME, IT'S MY SEX DRIVE
> Arena, the men's magazine, has just excitedly informed its readers that they are slime. "You lie – you cheat – you get it where you can – and you still want to live happily ever after!" crows the cover line. […] Thank heaven few women ever consult men's magazines, even of this relatively respectable variety. It's not so much the unreliable statistics that are offputting, but the tail-wagging tone in which they are presented – good old Fido's done it again, the rascal, the loveable mutt. But then it is equally fortunate that few women have been investigating the even more alarming information about men and women and the differences between them now being supplied by the rapidly advancing field of evolutionary psychology. (Sexton, 1998, 13 August; *Evening Standard*)

EP was also invoked by men to instead bemoan the shortcomings of modern masculinity. As with the 'men jokes' discussed above, Darwinian characterizations of men as unable to commit in relationships, clean up, communicate with others or do more than one thing at a time, as well as tendencies to violence, restlessness and ambition, fit well with this more anxious discourse:

> SLOBBING OUT BESIDE THE GENE POOL
> No specialist has yet been able to establish why scientific findings invariably reveal men to be limited, hopeless creatures in thrall to an inferior caveman biology whereas women invariably emerge from tests as nicer, more intelligent, versatile and emotionally mature than their male counterparts. […] Is it time for the genetically inferior modern male to be enhanced like the tomato? The man from Monsanto, he say, yes. (Blacker, 1998, 14 July; *Independent*)

A particularly pointed example of the interlinking of EP, sexual politics, and masculinity could be seen in the UK coverage of the affair between US President Bill Clinton and a young White House intern, Monica Lewinsky. Evolutionary psychologist

Steven Pinker commented on the unfolding scandal in an article in US newsmagazine *The New Yorker,* arguing that the affair was entirely consonant with 'ancient Darwinian rationales' and citing EP research on powerful promiscuous men and their attractions to/for young women (Pinker, 1998). This was reported on in the UK, where Pinker's book *How The Mind Works* had just been published, and so he continued in a similar vein in this newspaper interview:

> POOR MAN, HE CAN'T HELP HIMSELF
> "Most men really do care about their marriages, but then most men don't have the opportunities he has had. Who know what they would do if they had young White House interns throwing themselves at their feet? For most of us, it's never an issue." What though, of the women involved in the Clinton trysts? It is, of course, the power that attracts. […] Pinker says, though, that Hillary may well have made her own calculations. "In many ways, women are more willing to share a man than men are to share a woman – look at the number of societies on earth, for example, where you find polygamy. They'd sometimes rather be the second or third wife of a rich man than the first choice of a pauper." (Collier, 1998, 27 January; *The Scotsman*)

This sentiment was echoed by other Darwinians in both the US and UK media, with Robert Wright (1998, February 2) writing in a special issue of *Time* magazine in the US about the affair, and evolutionary biologist Richard Dawkins (1998, March 22) writing in the UK Sunday newspaper *The Observer*. Although as ever, these writers were keen to deny that their Darwinian positions justified Clinton's behavior, there was nonetheless a strong subtext that he 'couldn't help' following the evolutionary imperatives of millennia. In turn, feminists argued against the determinist implication that biology had straightforwardly led to Clinton's actions (Toynbee, 1998, 16 September; *The Guardian*). Other journalistic coverage drew together genetic science, EP and ideas from related areas such as primatology in discussing the affair:

> WHAT CAN OUR DNA TELL US ABOUT SEX IN THE OVAL OFFICE?: EVOLUTIONARY SEXOLOGY
> He's [*Clinton*] the silverback Alpha-male of the tribe and so it is hardly surprising that he might succumb to an atavistic impulse to both confirm and display his ascendancy by sexual conquest. (Sutcliffe, 1998, January 26; *Independent*)

Clinton was often described in this way, as a kind of ideal 'Darwinian man' a depiction that first appeared before the Lewinsky affair and continued long afterwards. As such, he can also be seen as a personification of the linkages that were made between evolutionary psychology and the centre-left politics of power of the 1990s, even in the UK.

Diverse Darwinisms: multiple feminisms

As well as the developments in gender politics and the broader political landscape I have described above, evolutionary stories about gender were also changing during the 1990s. Although EP was the most prominent version of Darwinism in the UK public domain at this time, sociobiology as an academic discipline had not gone away, and as mentioned in the Introduction, a multiplicity of other approaches to 'human nature' continued to flourish as well. Amongst these were the self-described 'Darwinian

feminists' (Fausto-Sterling, Gowaty and Zuk, 1997; p409), researchers influenced by developments in primatology, an area which has been transformed by the entry of women into the subject, as Haraway (1991) documents. By critically building upon many of the central ideas of sociobiology, Darwinian feminists have started to tell alternative stories about evolution, gender and sexuality. The evolutionary interests of females were re-examined in this light, and showing how it can be in females' interests to be promiscuous, to compete and co-operate with other animals, just as males do (Hrdy, 1981). They have deconstructed conventional narratives of sexual selections, showing how sex determination is far more fluid and less 'natural' than is often thought;[18] how in many species, including our own, males contribute to the care of offspring; that males can also be choosy and females competitive, and that sexual behavior can serve many non-reproductive functions, particularly for species that live in large social groups, such as humans. Importantly, Darwinian feminists have also argued that the complexity and flexibility of primates is such that systems of sex relations vary wildly from species to species, within species and even according to changes in the environment (Hrdy, 1999). Working from this perspective, the primatologist Barbara Smuts (1995) has even argued that the origins of patriarchy in human societies may be seen in the evolutionary interests of males in controlling female sexuality.

These feminist evolutionary voices were therefore also present and vocal in presenting their arguments in the UK media alongside the evolutionary psychologists. Science writer Natalie Angier drew upon this work in her popular book *Woman: An Intimate Geography* to build a feminist critique of EP (Angier, 1999). For example, in this newspaper piece, she argues that grandmothers and other female relatives play a much bigger role than fathers in helping care for dependant children:

> HOW IS IT FOR YOU?
> There is a division of labour by sex. But in hunting, the men are not engaging in the most calorifically productive enterprise. In many cases, they would be better off gathering, or combining an occasional hunt with the trapping of small prey. The big hunt, though, is a big opportunity to win status and allies. The women and their children in a hunter-gatherer society clearly benefit from the meat that hunters bring back to the group. But they benefit as a group, not as a collection of nuclear family units, each beholden to the father's personal wildeburger. (Angier, 1999, 29 March; *The Guardian*)

Continuing with this line of argument, sociobiologist Sarah Blaffer Hrdy's book *Mother Nature* (1999) explored this version of the evolutionary family in greater detail. Described in one review as a 'biological justification for working mothers' (Vines, 2000, 21 January; *Independent*), Hrdy's work made visible a long history of working motherhood, and again invoked ideas about the value of non-maternal childcare. Others took the idea of sexual selection at face value, and as with (in part drawing upon) the 'pro-women' feminism described earlier, turned sex differences around to argue for their positive value for women.[19] In almost direct opposition to the evolutionary stories of the 19th century discussed by Stephanie Shields (this volume), they argued that women's superior skills in communicating, networking and empathy give them great advantages in

the modern workplace (Fisher, 1999; Etcoff, 1999). In a similar fashion, the feminist writer Germaine Greer put her own twist on to the narrative of sexual selection:

> DO WE REALLY NEED MEN?
> Men are redundant not because of women or anything that women might do to them or without them, but because of biology. With every second, the world's men produce 200,000,000,000,000 sperm, while in the same space of time the world's women produce only 400 eggs; intensify that imbalance by considering that a woman becomes a mother only after nine months, and a man can be a father as many times as one of his billions of spermatozoa meets a viable egg, and you can see that the human race could continue on earth if 99.9% of human males were wiped out by some sex-linked disorder. (Germaine Greer, *The Guardian*, 16 November 2002)

Implicitly or explicitly, many of the Darwinian feminists leant towards this kind of 'pro-women', feminism, where for example Natalie Angier described herself as a 'female chauvinist sow' (Imlah, 1999, 21 March; *The Guardian*). Indeed the EP emphasis on gender differences was largely congruent with such feminist positions. It was this convergence of ideas which made it quite plausible – on the one hand - for female evolutionary psychologists to argue for their own feminist positions, in which the implications of evolutionary theory could be turned to women's advantage (e.g. Cronin, 1999; Fisher, 1999; Radcliffe Richards, 2002, January 4), and – on the other - for male evolutionary thinkers, including Steven Pinker, to claim sympathy with feminist goals (e.g., Ridley, 1993, October 24). Indeed, despite the opposition between EP and feminism seen in the case of Thornhill and Palmer's *A Natural History of Rape* (2000), the echoes of radical feminist ideas that 'all men are rapists' (e.g. Mackinnon, 1987) were strong enough that the phrase was used repeatedly in media coverage about the book.

Conclusions

In this paper, I have argued for the importance of narrative in building sciences such as evolutionary psychology which deal with questions of 'human nature', and have drawn upon the history of Darwinism to show how such narratives have had flexible and variable, but ever present, social and political significances ever since the publication of the *Origin of Species*. This paper has documented developments in evolutionary story-telling about humans during the late 20th century, by looking at the case of popular EP in the UK of the 1990s. Media coverage of EP involved a great deal of controversy, with arguments being put forward by academics from many disciplines, journalists and other commentators such as novelists. I have shown how these arguments functioned as stories, told about science, politics, religion, society, gender and sexuality, stories which were told, contested, and retold as part of wider debates about these issues occurring at the time. This in turn brought attention to the newly emerging subject of EP, as argued here by a PR involved in the marketing of popular EP books:

> They [*evolutionary psychologists*] opened up big social, big Nineties questions, they really opened up the can in so many interesting ways, and whether they're right or wrong, I think they've made debates much more interesting. (interview: popular science publishing PR, 28/07/01)

In this way, I have shown how important appeals to 'nature' (both human and animal) continue to be in such debates at the end of the twentieth century. Such appeals take on a particularly powerful role when discussing the role of evolution and human origins in shaping society, as has been argued by a broad range of scholars, not least the other contributors to this issue of *History of Psychology*

A significant part of the widespread social change occurring in the second half of the 20th century, particularly in the UK and other Western cultures, has been changes in gender relations, the social positions of men and women, and attitudes to sexuality. A major axis of contention during the Sociobiology controversy, occurring as it did in the mid-'70s alongside the emergence of second-wave feminism, was between male scientists and feminist activists. More recently, lines of debate over EP have also occurred along these lines, but with some crucial differences. As I have argued elsewhere, because many evolutionary psychologists have had disciplinary backgrounds in the social sciences and humanities, EP debates have disrupted the pro/anti evolution; natural/social science divisions which had developed through most of the 20th century (Cassidy, 2006). In this article, I have demonstrated how associations between evolution and conservative, antifeminist politics have also been disrupted and changed in this case. Just as in the many feminists were in favor of evolution and eugenics in the late 19th and early 20th centuries, today's Darwinian feminists are telling their own versions of evolutionary stories in which women are preeminent. These must compete with many other stories about evolution, gender and sexuality, and as we have seen here, the most prominent of these continue to be, at times quite strongly, conservative. However, the appearance of such a diversity of positions in the UK of the 1990s indicates how EP created an important space for debating who men and women are, how they relate to one another, how they should behave and what work they should do.

The appearance of feminist and other progressive versions of evolutionary stories should therefore be taken as reflective of these changes, and of the increasingly powerful position of people who have until recently been marginalized by society. In this context, it is interesting to reflect upon the Darwinian stories which have been less prominent, or indeed continue to be invisible. My analysis has shown how the overwhelming majority of popular discussions of EP were focused upon the nature of heterosexual attraction and relationships. Although some sociobiologists did attempt explanations of homosexuality (e.g. Ruse, 1988), most evolutionary thinkers, including the evolutionary psychologists, have struggled to explain any human sexuality or sexual behavior which is non-reproductive. However, in recent years, some accounts have started to appear in which offer more nuanced accounts of the evolution of human sexuality, even amongst the evolutionary psychologists (e.g. Miller, 2000). Other accounts, some of which position themselves as what I would describe as 'queer Darwinisms', have drawn upon human anthropology as well as studies of animal behavior as a resource to tell their stories. They argue that sexual behavior (including non–reproductive and same-sex sex) may also play important roles in reinforcing bonds and diffusing conflicts within a social group (Bagemihl, 1999; Hird, 2004; Roughgarden, 2004; de Waal, 1997). However, these are, as yet, minority voices in discussions about Darwinism and humans, and indeed continue

to attract criticism and spark lively debates in both the evolutionary and psychological research communities (Hrdy, 2004; Wilson and Rahman, 2004).[20]

However, this example can be contrasted with that seen in current debates around evolution, biology and race/ethnicity, also an important nexus of debate in the Sociobiology controversy. As noted above, in this area, the most prominent public debate continues to be that over the possibility of links between race and IQ, centred upon a popular book on the subject published in the mid-Nineties (Hernstein and Murray, 1994). Evolutionary psychologists have worked hard to distance themselves from this issue, both by stressing their argument that only 'human universals' can be the product of evolutionary processes (implying that ethnic differences cannot), and by researching the possible evolutionary roots of racism itself (Kurzban et al, 2001). Aside from this, the history of Darwinian thought regarding race continues to cast such a poisonous legacy that few researchers have returned to engage with the subject in any way. As described earlier in the article, the UK media coverage of EP reached a peak in the year 2000, and then began to fall sharply in the years following the millennium. While a detailed examination of this period is beyond the scope of this article, it is worth pausing briefly and assessing the possible reasons for this drop in the popularity of EP. While in part it can be attributed to a deflation in the UK popular science boom, as well as the tendency for media agendas to move away from any issue seen as no longer 'new' and exciting, a brief glance at the political landscape of the mid-2000s shows us a world which is very different from that of the mid-1990s. Even though Tony Blair continues to hold power in the UK, Labour is also no longer New, and their alliance with US Republican president George Bush (elected in 2000) signifies the generalized shift of power towards the right in this decade. In terms of media agendas, following the terrorist attacks of September 11th, 2001, the war in Iraq, and increased levels of international unrest, it seems that media attention has once again become more focused upon international news and politics, literally leaving less coverage space for subjects such as EP. As we move into the 21st century, paying continued attention to how scientists, journalists and other social actors make 'appeals to nature' can provide us with an important resource for understanding how our societies will continue to change into the future.

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Notes

[1] To talk about these sciences in terms of story-telling does *not* imply that they are 'just' stories, or made up in some way. Instead, it underlines the power of narrative in these sciences, both within academia and in the ways they are discussed in the public domain.
[2] 'Evolutionary psychology' is a term that has rarely been used in the German context, while 'soziobiologie' remains in common use: at present it is not known why this might be.
[3] I am unsure that a 'purely' symmetrical approach is actually at all possible in analysing such a complex and politically charged debate as that over evolutionary psychology; however the process of attempting symmetry has been invaluable to me in understanding this controversy.
[4] For example, some evolutionary psychologists argue that their use of the concept of evolved psychological 'modules' and interest in human universals, rather than studying evolved behaviour and

population differences, provides a key differentiation from sociobiologists (see, e.g. Barkow et al, 1992). As discussed later in the article, this also works to create a distance between EP and the evolutionary influenced, psychological study of race-IQ differences. However, these definitions are contested by other actors in the field, including sociobiologists and other "evolutionary" psychologists (Cassidy, 2006), so an uncritical adoption of them would be problematic for this work.

[5] This article, and the other pieces arising from this research, constitute what Bauer (2000) describes as a 'production-mediation' study of popular EP – looking at the content of and how this coverage has arisen. A 'reception' study (addressing audiences' interactions and reactions to this media coverage) would be of great interest, but would involve a very different theoretical and methodological toolkit, and therefore currently awaits further investigation.

[6] These terms refer in part to the physical size of the newspapers, but more importantly describe their role in the market as a whole, ranging from the popular, simply written and high circulation tabloids, through to the more elite, wordy and low circulation broadsheet newspapers.

[7] Sociobiologists such as E.O. Wilson and Richard Dawkins could be best described at the time as politically naïve or broadly liberal (apart from on feminist issues), while others such as John Maynard Smith were Marxists, just like their opponents (Jumonville, 2002).

[8] See Cassidy (2006) for a more detailed discussion of evolutionary psychologists' creation of such rhetorical boundaries.

[9] Although at face value this may seem an obvious connection to make, the 'gene' as discussed in evolutionary biology is an abstracted concept quite different from the 'genes' found in DNA sequencing.

[10] It is very difficult to talk about these processes without using anthropomorphic, gendered language, as noted by Emily Martin in her work on the stories scientists tell about egg and sperm cells (1991).

[11] 'High quality' can mean a variety of things, from an organism being physically healthy and strong, to the idea of it having 'good genes' (see Ridley, 1993; 127-63).

[12] However, there may well be more indirect evolutionary pressures involved here: for a more nuanced EP discussion of sexuality, see Miller (2000, p217-9).

[13] For a more detailed analysis of how Thornhill and Palmer's work was rhetorically directed against feminism and social science explanations of rape, see Collins (2000).

[14] As well as analysing the UK media coverage of evolutionary psychology, semi-structured interviews were carried out with 21 academics, authors and other media professionals involved in the debates. For further methodological details, see Cassidy (2005, 2006).

[15] See also the American self-help book *The Rules* (Fein and Schneider, 1995).

[16] In the UK, Channel Four is a publicly funded but independent public broadcast television channel, which specialises in higher quality news and current affairs, and equivalent drama and comedy programming. During 2001, an episode of *Ally McBeal* was screened on Channel Four, which made a direct reference to evolutionary psychology research on beauty and facial symmetry.

[17] Similar to a character played by Tom Cruise in the film *Magnolia* (1999): see Goodwin (2000, 23 January; *The Sunday Times*), 'Seduction is a trial for the older sex guru'.

[18] For example, many animals have radically different systems whereby sex is determined by environmental conditions, or even where males do not exist (see Crews, 1988; Fausto-Sterling, 1992; Ridley, 1993)

[19] Another example of the intermingling of Darwinian feminist and earlier feminist thought about the value of women's 'natural differences' can be seen on the Chatto and Windus cover of Hrdy's *Mother Nature*, which shows a close-up image of a Paleolithic female figurine, which have been reclaimed by feminists as 'goddess' images (e.g. Gimbutas, 1982)

[20] For an alternative perspective on biological claims about sexuality and contemporary liberal politics, see Waites (2005).